REMARKS

Claims 1 through 7 are pending in this application. Claims 1 through 7 have been rejected under section 103. The Examiner has also required a new title.

In response, claim 1 has been amended, an amended title is presented, and arguments are presented to traverse the Examiner's rejection.

TITLE OF THE INVENTION

The Office Action stated that the title of the invention is not descriptive, and that a new title that is clearly indicative of the invention to which the claims are directed is required.

Applicants have amended the specification by amending the title of the present application to the new title "Asynchronous/Synchronous KVMP Switch for Console and Peripheral Devices."

It is respectfully submitted that the new title is now fully descriptive, and clearly indicative of the invention to which the claims are directed. Accordingly, in view of the amended to the title, Applicants respectfully request the withdrawal of the objection to the title.

AMENDMENT TO CLAIMS

As explained in the Description, a problem with current KVM switches is that if a USB peripheral, such as a printer, is connected to the KVM switch, data flow is interrupted to that peripheral when the switch is changed. (¶ 0003) The present invention meets this need by providing a KVM switch which can switch the KVM channels and

peripheral channels (i) to a common computer or to different computers either asynchronously or synchronously and (ii) without interruption of data flow to that peripheral when the switch is changed. (¶ 0007)

The Description of the present invention explains that the console devices can be switched either synchronously or asynchronously with the one or more than one peripheral device to the same one of the plurality of computer systems or to different ones of the plurality of computer systems:

> The signal switch can either asynchronously or synchronously switch KVM channels and peripheral channels to a common computer or different computer. In other words, the KVM channels and peripheral channels may be switched together (synchronously) or separately (asynchronously). (¶ 0023)
> . . . . It thus can be seen that any desired tree of hubs/peripherals can be connected to signal switch 10 and thus controlled synchronously or asynchronously by the one or more than one computer systems 12 under the management of a single set of monitor 14, first keyboard 16, and first mouse 18. (¶ 0027)

The Description of the present invention also explains that the console devices can be switched without interruption of the signal to the one or more than one peripheral device:

> Thus, for example, the first data flow between first computer 121 and first printer 22, a second data flow between third computer 123 and scanner 241, and a third data flow between fourth

> computer 124 and second printer 2421 all could be maintained without interruption while keyboard 16 and mouse 18, and optionally monitor 14, are switched among computer systems 12. (¶ 0028) (emphasis added)

In order to better point out and distinctly claim the invention, Claim 1 has been amended to add:

> "wherein the console devices can be switched either synchronously or asynchronously with the one or more than one peripheral device to the same one of the plurality of computer systems or to different ones of the plurality of computer systems, without interruption of the signal to the one or more than one peripheral device."

As noted above, there is clear support in the Description for this amendment.

CLAIMS REJECTIONS - 35 U.S.C. §103(A)

The Examiner has rejected all claims under 35 U.S.C. § 103(a) as being unpatentable over Thomas et al. (US No. 6,671,7556) in view of Dickens et al. (US No. 6,659,966). Respectfully, the Examiner has misunderstood the use of the word "peripheral" as used in Thomas et al. Neither Thomas et al. nor Dickens et al., alone or in combination, teach nor fairly suggest the invention as claimed.

Thomas et al. is Inapposite

The Examiner states:

> "In regard to claims 1, 5, 7, Thomas et al. disclose a signal switch for sharing a video monitor 37, a plurality of console devices 31,

> 3, 2 complaint with an industry standard and one or more than one peripheral device in any of a plurality of computer systems (see figure 6, col. 6, lines 36-55), comprising a CPU 46 comprising a first memory 53 for storing a management program for managing the signal switch (see figure 9, col. 8, lines 34-67); a hub switch module 41 connected to the CPU and configured to communicate with any of the plurality of computer systems 13, and **the one or more than one peripheral device 45**, such that a signal passing form the hub switch module to **the one or more than one peripheral devices** emulates origination from a computer . . . " (Office Action, p. 2, emphasis added)

Applicant respectfully notes that the Examiner has ***misunderstood the use of the word "peripheral" in Thomas et al.***, in which it refers to a keyboard, video monitor, or mouse:

> "Using the connections of FIG. 2, the switch 2 provides keyboard, mouse, and monitor signals via the port 29A to the computer 13A via the cable 14. The computer 13A receives the keyboard, mouse, and video signals (and also transmits appropriate signals to the switch 2) such that the computer 13A is unaware that it is speaking to a KVM switch 2 **rather than to an actual keyboard, video, and mouse peripheral.**" (c.5, ll. 9-16, emphasis added)

In fact, "device 45" in Thomas, et al. is a video subsystem 45. In the present invention, however, these are referred to as "console devices" while such units as printers

are referred to as "peripherals". **Thomas et al. do not teach nor fairly suggest the use of their invention for switching true peripherals, such as printers**. Further, nowhere in Thomas et al. is there any teaching that teaches or fairly suggests the asynchronous or synchronous switching of printers (or other peripherals) with console devices such as keyboards, mice and monitors.

Further Clarification Needed

The Examiner states that "Thomas et al. disclose a signal switch for sharing a **video monitor 37**, a plurality of **console devices 31, 32, 2** complaint with an **industry standard** and one or more than one peripheral device in any of a plurality of computer systems (see **figure 6, col. 6, lines 36-55**)."

It is respectfully submitted that in Thomas et al. reference numbers 31, 32, and 2 correspond to a plurality of switches, and not console devices, and neither figure 6, nor col. 6, lines 36-55 disclose a video monitor with reference number 37. The reference number 37 corresponds to another switch 37, illustrated in figure 8. In addition, no mention of any compliant standards could be found in relation to figure 6, or within the cited description in col. 6, lines 36-55 of Thomas et al.

Figure 6 of Thomas et al. discloses three switches 2, 31, and 32, two workstations 3 and 7, each with a keyboard, mouse, and monitor, and a plurality of computers 13A -13C, 35A-35C, and 36A-36C. Col. 6, lines 36-55 of Thomas et al. disclose how to cascade the illustrated computers to the two workstations 3 and 7, and their respective keyboards, mice and monitors via switches 2, 31, and 32.

If the Examiner would clarify his remarks, the Applicants wish to respond on the merits. As it stands, however, Applicants are unable to respond to this portion of the Office Action.

Thomas et al. Do Not Teach A Hub Switch Module

The Examiner also states that Thomas et al. disclose:

> "a **hub switch module 41** connected to the CPU and configured

> to communicate with any of the plurality of computer systems 13, and the one or more than one peripheral device 45, such that a signal passing from the hub switch module to the one or more than one peripheral device emulate origination from a computer (see figure 8, col. 7, line 42 through col. 8, line 33); and a video control module 44 connected to the CPU and configured to communicate with a video monitor device 45 (see figure 8, col. 7, line 42 through col. 8, line 33). (Office Action, pp. 2-3)

Here again, clarification from the Examiner is needed, because the cited figure 8 and the description in col. 7, line 42 to col. 8, line 33 of Thomas et al. actually disclose an FPGA (Field Programmable Gate Array) 41, which is a general purpose chip that can be programmed to carry out a specific hardware function. In general, an FPGA is a specialty digital semiconductor often used for prototyping. Nonetheless, the reference is silent with respect to the functionality of the FPGA 41. It does not teach or suggest (implied or otherwise) that the FPGA 41 functions as the claimed "hub switch module." As illustrated in figure 8, the FPGA 41 is coupled to an OSD subsystem 44, a video subsystem 45, and a processor 38, none of which are "peripheral devices" as used in the present disclosure. (They are not even "peripheral" as used in Thomas et al., *e.g.*, a keyboard, mouse, or monitor.)

In particular, with reference to figure 8, column 7, lines 61+, Thomas et al. state that "between the signal processor 38 and the PCs 13 is a FPGA 41. Embodied in the FPGA is a computer I/O 42 providing input/output interfacing between the processor 38 and the PCs 13." The processor 38 is not a peripheral device under any definition.

Thomas et al. continues by disclosing that the FPGA 41 also provides a sync generator 43 for synchronization of the OSD (On Screen Display) subsystem 44 to the processor 38, and further states that "the OSD subsystem 44 can be a standard Motorola OSD chip." The OSD chip 44 is not a peripheral device under any definition.

Continuing with column 8, lines 1+, Thomas et al. further state that a "video subsystem 45 receives video signals directly from PCs 13 and inputs them to the processor 38, with appropriate OSD menuing overlays received from the OSD subsystem 44." The FPGA 41 plays no role with respect to the video subsystem 45, and in fact, communication is done directly between the PCs 13 and the video subsystem 45, without the FPGA 41. The subsystem 45 is not a peripheral device under any definition. Accordingly, it appears that the FPGA 41 of Thomas et al. does not communicate, nor is it configured to communicate with the video subsystem 45 as stated in the Office Action.

Therefore, as clearly illustrated in figure 8, it is the processor 38 that is configured to communicate with the Thomas et al. console devices, which are the keyboards 5 and 9, pointing instruments 6 and 10, and video 4 and 8, and not the FPGA as stated in the Office Action. Accordingly, it is respectfully submitted that Thomas et al. do not teach or suggest (implied or otherwise), the claimed limitation of "a hub switch module connected to the CPU and configured to communicate with any of the plurality of computer systems, and the one or more than one peripheral device."

Dickens et al. Do Not Teach Asynchronous/ Synchronous Switching

The Office Action uses Dickens et al. as a secondary reference, and combines the teachings of Dickens et al. with Thomas et al. to purportedly meet the limitations of the claims that the Office Action acknowledges lack in Thomas et al. In view of the above-mentioned reasons, however, it is apparent that Thomas et al. lack much more than the claimed limitations of the device control module and the host control module. Further, there is no motivation cited for combining these references.

Nonetheless, the Office Action states that:

> "Dickens et al. discloses the data routing device for use in routing serial data between a computer and a peripheral comprising a device control module for emulating according to the industry standard the plurality of console devices, connected to the CPU

and the hub switch module (see col. 3, lines 12-28); a host control module connected to the CPU and configured to communicate with the plurality of console devices (see col. 3, lines 41-64)."

Dickens et al. teaches a routing device, not a switching device. A simple example will demonstrate the difference between Dickens et al. and the present invention. Figure 1 from the present invention is as follows:

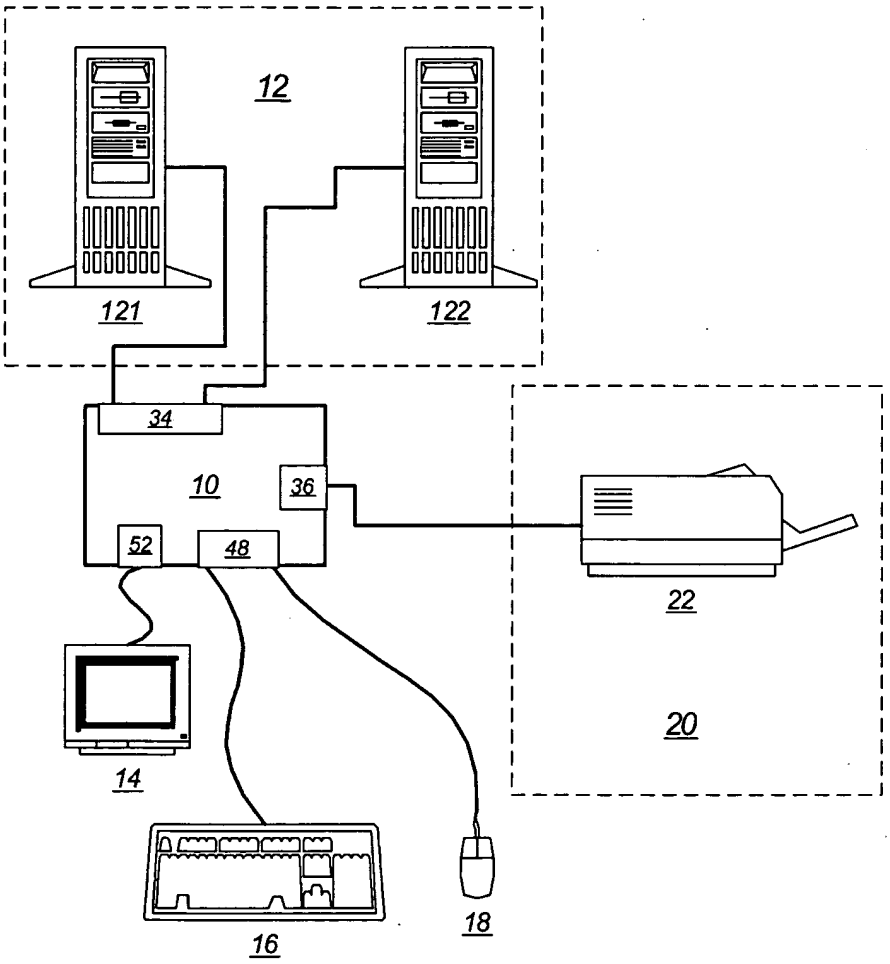

Fig. 1

Here, the console devices are keyboard 16, mouse 18, and video monitor 14. The peripheral device is first printer 22. There are first computer 121 and second computer 122. By way of example, suppose that in an initial state, console devices (14, 16, 18) and printer 22 are connected to first computer 121, which is sending a signal through switch 10 to printer 22 (a document being spooled, for example). The user now switches to a second state, in which switch 10 synchronously connects console devices (14, 16, 18) and printer 22 to second computer 122. The data stream coming from first computer 121 at the time of the switching is left unaffected (the document being spooled finished printing), but otherwise printer 22 is now connected to second computer 122:

> "actual console devices may be switched to a second or different computer system, leaving any channels between the first computer system and peripherals connected, any data flow in such channels uninterrupted, and the first computer system still processing as if the actual console devices, now emulated, were still connected." (¶ 0034)

In contrast, Dickens et al. functions like a router, *e.g.*, more like a network. Switch 10 of the present invention is replaced by a data routing device 100. Dickens et al. teach a system of arbitration to avoid conflicts when the computers send data to the printer:

> "Unresolved conflicts would therefore occur if more than one USB host was connected to the same USB peripheral bus without providing a system of arbitration." (c.1, ll. 60-62).

. . . .

> When utilised in printer sharing apparatus the invention can enable data from two or more USB host computers to contend for a USB connected printer on a timeout basis. Data activity from each of the computers can be monitored and routed through to the printer on a first come first served basis. (c. 2, ll. 45-48)

Dickens et al. do not allow the user to switch the peripherals synchronously with the console devices; rather they remain connected to a "network" and the host computers contend for the channel to the peripheral independent of the console device connections. Therefore, Dickens et al., neither alone nor in combination with Thomas et al., teach or fairly suggest switching the console devices either synchronously or asynchronously with one or more peripheral devices to the same one of a plurality of computer systems, or to different ones of the plurality of computer systems, without interruption of the signal to the one or more peripheral devices."

Claim 1

For the reasons explained above, claim 1 is not obvious over Thomas et al. in view of Dickens et al. The Applicants respectfully request that the rejection be withdrawn.

Claims 2-4

As claims 2 - 4 are dependent upon an allowable claim, the Applicants respectfully request that the rejections be withdrawn.

Claim 5

Claim 5 is an independent method claim. Although its limitations are very different from apparatus claim 1, the Office Action lumps the two together, without any discussion of the actual claim 5 limitations. It is respectfully noted that the claim is

drawn to the process of a portion of a management program 42 suitable for use in the present invention. See Figure 5, ¶¶0041-0046. This is not present in Thomas, et al. or Dickens et al.

Neither Thomas, et al. nor Dickens et al., alone or in combination, teaches nor fairly suggest a method for sharing a video monitor, a plurality of console devices compliant with an industry standard and one or more than one peripheral device in any of a plurality of computer systems through a signal switch, comprising initializing the signal switch; emulating one or more of the console devices according to the industry standard; enumerating ports of a root hub; determining whether any downstream ports exists, and if so, enumerating the downstream ports; determining whether any of the plurality of console devices is connected to the root hub, or any downstream ports, and if so, then enumerating each connected device; determining whether any of the connected devices is compliant with the industry standard; enumerating each complaint connected device and parsing any data from such device; and repeatedly polling to determine whether any of the plurality of console devices, any of the one or more than one peripheral device, or any downstream port, has been plugged or unplugged, and if so, resetting control.

The Applicant therefore respectfully requests that the rejection as to claim 5 be withdrawn.

Claim 6

As claim 6 is dependent upon allowable claims, the Applicants respectfully request that the rejection be withdrawn.

Claim 7

Claim 7 was not separately addressed in the Office Action, and it is respectfully noted that the claim is drawn to switching the selected console device "without interruption of the data flow" between the selected computer system and the selected peripheral device.

As noted above, neither Thomas et al. nor Dickens et al., alone or in combination, teach nor fairly suggest a switch wherein the console devices can be switched synchronously with peripherals, without interruption of the signal to the peripheral devices. Therefore, neither Thomas et al. nor Dickens et al., alone or in combination, teach nor fairly suggest a signal switch for sharing one or more console devices and one or more peripheral devices in any of a plurality of computer systems, comprising a first channel for connecting a selected console device from the one or more console devices to a first selected computer system from the plurality of computer systems; a second channel connecting the first selected computer system to a selected peripheral device from the one or more peripheral devices, the second channel having a data flow between the first selected computer system and the selected peripheral device; a third channel for connecting the selected console device to a second selected computer system from the plurality of computer systems; and means for switching the selected console device between the first channel and the third channel without interruption of the data flow through the second channel between the first selected computer system and the selected peripheral device.

The Applicants therefore respectfully request that the rejection as to claim 7 be withdrawn.

CONCLUSION

Applicants believe that all pending claims are now allowable. If there remain any issues in this case which can be addressed by telephone, the Examiner is encouraged to contact the undersigned at the telephone number listed below.

Please charge any fees associated with the filing of this document to Deposit Account No. 19-2090.

Respectfully submitted,
SHELDON & MAK PC

Date: April 6, 2005 By: Robert J. Rose

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CERTIFICATE OF MAILING BY "EXPRESS MAIL" (37 CFR 1.10) Applicant(s): LOU, et al.			Docket No. 13902-1	
Application No. 10//065,375	Filing Date October 10, 2002	Examiner PHAN, Raymond	Customer No. 23676	Group Art Unit 2111

Invention: **Signal Switch for Console and Peripheral Devices**

I hereby certify that the following correspondence:

Transmittal; Response and Amendment; Copy of Office Action dated 12/08/2004; and Petition for Extension of Time

(Identify type of correspondence)

is being deposited with the United States Postal Service "Express Mail Post Office to Addressee" service under 37 CFR 1.10 in an envelope addressed to: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450 on

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TRANSMITTAL FORM

(to be used for all correspondence after initial filing)

Application Number	10/065,375
Filing Date	October 10, 2002
First Named Inventor	LOU, Tony
Art Unit	2111
Examiner Name	PHAN, Raymond
Total Number of Pages in This Submission: 32	Attorney Docket Number: 13902-1

ENCLOSURES *(check all that apply)*

- [ ] Fee Transmittal Form
- [ ] Fee Attached
- [x] Amendment / Reply
- [ ] After Final
- [ ] Affidavits/declaration(s)
- [x] Extension of Time Request
- [ ] Express Abandonment Request
- [ ] Information Disclosure Statement
- [ ] Certified Copy of Priority Document(s)
- [ ] Response to Missing Parts/ Incomplete Application
- [ ] Response to Missing Parts under 37 CFR 1.52 or 1.53
- [ ] Drawing(s)
- [ ] Licensing-related Papers
- [ ] Petition
- [ ] Petition to Convert a Provisional Application
- [ ] Power of Attorney, Revocation Change of Correspondence Address
- [ ] Terminal Disclaimer
- [ ] Request for Refund
- [ ] CD, Number of CD(s) _____
- [ ] After Allowance communication to Technology Center (TC)
- [ ] Appeal Communication to Board of Appeals and Interferences
- [ ] Appeal Communication to TC **(Appeal Notice, Brief, Reply Brief)**
- [ ] Proprietary Information
- [ ] Status Letter
- [x] Other Enclosure(s) *(please identify below)*: **Self-Addressed Stamped Postcard**

Remarks

SIGNATURE OF APPLICANT, ATTORNEY, OR AGENT

Firm or Individual name	**Robert J. Rose, Reg. No. 47,037** **Sheldon & Mak PC**
Signature	Robert J Rose
Date	**April 6, 2005**

CERTIFICATE OF TRANSMISSION/MAILING

I hereby certify that this correspondence is being facsimile transmitted to the USPTO or deposited with the United States Postal Service with sufficient postage as first class mail in an envelope addressed to: Commissioner for Patents, P.O. Box 1450, Alexandria,VA 22313-1450 on the

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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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EXAMINER	
PHAN, RAYMOND NGAN	
ART UNIT	PAPER NUMBER
2111	

DATE MAILED: 12/08/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/065,375	LOU ET AL.	
	Examiner	Art Unit	
	Raymond Phan	2111	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☐ Responsive to communication(s) filed on _____.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) 1-7 is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) 1-7 is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date 06022003.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

Part III DETAILED ACTION

Notice to Applicant(s)

1. This application has been examined. Claims 1-7 are pending.

2. The Group and/or Art Unit location of your application in the PTO has changed. To aid in correlating any papers for this application, all further correspondence regarding this application should be directed to Group Art Unit 2111.

Specification

3. The title of the invention is not descriptive. A new title is required that is clearly indicative of the invention to which the claims are directed.

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. § 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

5. Claims 1-7 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Thomas et al. (US No. 6,671,756) in view of Dickens et al. (US No. 6,549,966).

In regard to claims 1, 5, 7, Thomas et al. disclose a signal switch for sharing a video monitor 37, a plurality of console devices 31, 32, 2 compliant with an industry standard and one or more than one peripheral device in any of a plurality of computer systems (see figure 6, col. 6, lines 36-55), comprising: a CPU 46 comprising a first memory 53 for storing a management program for managing the signal switch (see figure 9, col. 8, lines 34-67); a hub switch module 41 connected to the CPU and configured to communicate with any of the plurality of computer systems 13 , and the one or more than one peripheral device 45, such that a signal

passing from the hub switch module to the one or more than one peripheral device emulates origination from a computer (see figure 8, col. 7, line 42 through col. 8, line 33); and a video control module 44 connected to the CPU and configured to communicate with a video monitor device 45 (see figure 8, col. 7, line 42 through col. 8, line 33). But Thomas et al. do not specifically disclose a device control module for emulating according to the industry standard the plurality of console devices, connected to the CPU and the hub switch module; a host control module connected to the CPU and configured to communicate with the plurality of console devices. However Dickens et al. disclose the data routing device for use in routing serial data between a computer and a peripheral comprising a device control module for emulating according to the industry standard the plurality of console devices, connected to the CPU and the hub switch module (see col. 3, lines 12-28); a host control module connected to the CPU and configured to communicate with the plurality of console devices (see col. 3, lines 41-64). Therefore, it would have been obvious to a person of an ordinary skill in the art at the time the invention was made to have combined the teachings of Dickens et al. within the system of Thomas et al. because it would be desirable for cost, convenience and space saving reasons to share peripherals between groups of computers.

In regard to claim 2, Thomas et al. further disclose an OSD control device connected to the CPU and the video control module (see col. 8, col. 7, line 42 through col. 8, line 33).

In regard to claim 3, Dickens et al. disclose the host control module comprising a root hub (see col. 3, lines 41-64). Therefore, it would have been obvious to a person of an ordinary skill in the art at the time the invention was made to have combined the teachings of Dickens et al. within the system of

Thomas et al. because it would be desirable for cost, convenience and space saving reasons to share peripherals between groups of computers.

In regard to claim 4, even though the teaching of Dickens et al. do not specifically disclose wherein the industry standard is the Device Class Definition for Human Interface Devices (HID), however one skilled in the art would have understood that they can choose to have Device Class Definition for Human Interface Devices (HID) such as barcode scanner, camera, mouse, etc to fulfill their need.

In regard to claim 6, Thomas et al. disclose wherein the management program comprises steps for managing the signal switch, and the method of claim 5 (see figure 8, col. 7, line 42 through col. 8, line 33).

Conclusion

6. All claims are rejected.

7. The prior arts made of record and not relied upon are considered pertinent to applicant's disclosure.

Fredderick et al. (US No. 6,314,479) disclose a universal multi-pin plug and display connector for standardizing signals transmitted between a computer and display for a PC theatre interconnectivity system.

Kumata (US No. 6,715,010) discloses a bus emulation apparatus.

Rafferty et al. (US No. 6,324,605) disclose a computer and peripheral switch with USB.

Bealkowski (US No. 6,697,905) discloses an apparatus for providing I/O support to a computer system and method of use thereof.

Gough (US Pub No. 2003/0005186) discloses a peripheral sharing device with unified clipboard memory.

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to examiner Raymond Phan, whose telephone number is (571) 272-3630. The examiner can normally be reached on Monday-Friday from 6:30AM- 4:00PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's Primary, Paul Myers can be reached on (571) 272-3639 or via e-mail addressed to paul.myers@uspto.gov. The fax phone number for this Group is (703) 872-9306.

Communications via Internet e-mail regarding this application, other than those under 35 U.S.C. 132 or which otherwise require a signature, may be used by the applicant and should be addressed to **[raymond.phan@uspto.gov]**.

All Internet e-mail communications will be made of record in the application file. PTO employees do not engage in Internet communications where there exists a possibility that sensitive information could be identified or exchanged unless the record includes a properly signed express waiver of the confidentiality requirements of 35 U.S.C. 122. This is more clearly set forth in the Interim Internet Usage Policy published in the Official Gazette of the Patent and Trademark on February 25, 1997 at 1195 OG 89.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see hop://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Any inquiry of a general nature or relating to the status of this application should be directed to the TC 2100 central telephone number is (571)272-2100.

PAUL R. MYERS
PRIMARY EXAMINER

RP

Raymond Phan
12/2/04